


MDCH Department of Community Health

Crime Victims, EMS & Trauma Systems Division

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MCA IRB/Special Study 2013



Research Studies

■ IRB Studies

- University of Michigan – Analysis of Motor Vehicle Crash Occupants Injured in Michigan
- Identifying Domestic-Violence Involved in Trauma Patients
- Pediatric Prehospital Medication Dosing Errors: A Qualitative Study
- Michigan EMS Information System Project



IRB Studies

- University of Michigan – Analysis of Motor Vehicle Crash Occupants Injured in Michigan
 - Need to get more rapid feedback on how the newest vehicle safety technologies are performing in the real world so that new technologies for improving safety can be more widely and quickly implemented into new vehicles.
 - Study crash configurations to assess how well the engineering and design changes are performing.
 - Vehicles equipped with an advanced OnStar system that has automatic collision notification (ACN) capabilities will be included in study. ACN uses an algorithm to predict injury patterns. The study of the injury patterns will allow us to improve the injury predictions for the algorithm.
 - Upon the event of a crash, ACN transmits information to OnStar about the severity and characteristics (frontal, rear, rollover)

IRB Studies

- Identifying Domestic-Violence Involved in Trauma Patients – Catherine Kothari (Borgess and Bronson Medical Centers)
 - Goal is to determine the overlap of acute care patients (ED and Trauma related) and domestic-violence-criminal involvement
 - Retrospective study linking hospital administrative data on acute care patients with criminal justice administrative data from police and prosecutor files of victims and defendants in domestic-violence-related cases over an 11-year period.
 - Looking to expand this study to all crimes with an identified victim and examine the overlap of crime victimization with receipt of mental health/substance abuse services.

IRB Studies

- Pediatric Prehospital Medication Dosing Errors: A Qualitative Study – Dr. John Hoyle, MSU
 - Pediatric prehospital drug-dosing errors occur at a high rate as demonstrated by two previous studies.
 - Goal is to decrease adverse events from pediatric prehospital drug dosing errors.
 - Objective is to develop an in-depth understanding of the current practices for administering drug doses to children in the prehospital setting, identify barriers and enablers to correct prehospital drug dosing in Michigan through the use of an established patient safety framework

IRB Study

- Michigan EMS Information System Project – Dr. William Fales, Western Michigan University, Kalamazoo Center for Medical Studies
 - Purpose is to assess and improve the quality of patient care and overall effectiveness of the State's EMS System
 - Designed to analyze data that is currently stored in the State's EMS Information System. Data includes demographic, clinical, and operational data electronically collected by licensed EMS agencies. Data will not include patient identifiers.
 - A more detailed focus will be on data quality and continued use of data to better understand various aspects of Michigan's EMS system.

Summary

- Data is an important tool in protocol and policy development
- However, the ability to effectively use data is dependent on the quality of data in the system
- Optimizing data quality needs to be a priority for MI EMS at all levels (agency, MCA, State).

Special Studies

- The Department has the ability to develop and implement field studies (Section 20910 and Rule 214) if specific conditions are met:
 - EMSCC reviews prior to implementation
 - Study is conducted under a MCA
 - EMS Personnel receive specific training related to the new skill, technique, procedure, or equipment.

Special Studies (1)

A Medical Control Authority intending to establish a protocol involving the use of skills, techniques, procedures, or equipment that are not included in the Michigan/National curriculum AND ARE NOT consistent with their licensure level, must be submitted as a Special Study and comply with the following:

Special Studies

- Submit endorsements by the MCA and medical director
- Obtain and submit a hospital institutional review board (IRB) approval.
- Submit a timeline clarifying the duration of the study. Including number of cases and estimated date to reach requirement.
- Submit initial and refresher education requirements. Refresher education shall include frequency, content, and maintenance of proficiency.

Special Studies

- Identify life support agencies involved in study and number of personnel to be educated.
- If providing mutual aid outside its MCA region, the MCA shall have a written agreement with another MCA to continue to utilize protocols.
- Identify a special study coordinator.

Special Studies

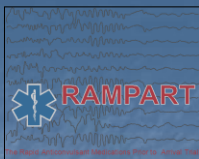
- Identify data parameters to be collected and the quality review process.
Submission of reports to the department.
- Submission of all protocols that will be included in the study.

Special Studies (2)

A Medical Control Authority wishing to establish a protocol involving the use of skills, techniques, procedures, or equipment that are not included in the Michigan/National curriculum, but are consistent with generally accepted practices at their licensure level, must comply with the following:

Special Studies

- When a MCA submits a protocol that meets the criteria identified above, the MCA must meet all the requirements of a Special Study except they do not need to obtain IRB approval or identify a special study coordinator.

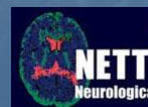
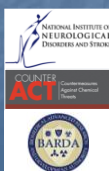


WAYNE STATE
UNIVERSITY



Stop seizing! It may kill you!

Taher Vohra, MD
Dept of Emergency Medicine
Henry Ford Hospital
Detroit, MI



Current Treatments

Medications

- Diazepam
 - IV or Rectal
- Lorazepam
 - IV

Problems

- IV starts on seizing patients not easy and can delay treatment
- Rectal has variable absorption and not preferred
- Lorazepam not temperature stable for long periods of time

What about an IM medication?

RAMPART Background

- Paramedic treatment of status epilepticus
- Standard treatment is IV benzodiazepine
- IV starts difficult / dangerous in the convulsing patient
- Best IV agent, lorazepam, impractical for EMS
- IM treatment is faster and easier
- Best IM agent, midazolam, *is* practical for EMS

Summary

- Intramuscular midazolam is the optimal initial prehospital treatment for status epilepticus by paramedics
- Next steps are facilitating clinical translation

**STATE PROTOCOL –
SEIZURES (ADULT &
PEDIATRIC)**

<p align="center"><u>Benzodiazepine Options</u> (Choose One)</p> <p><input type="checkbox"/> Diazepam 2 - 10 mg (0.1 mg/kg) IV/IO or 2 - 10 mg (0.5 mg/kg) rectally OR</p> <p><input type="checkbox"/> Midazolam 2 - 5 mg (0.05 mg/kg) IV/IO/IM OR</p> <p><input type="checkbox"/> Lorazepam 1 - 4 mg (0.1 mg/kg) IV/IO</p>		<p align="center"><u>Glucagon</u> 1 mg IM</p> <p><input type="checkbox"/> Included <input type="checkbox"/> Not Included</p>
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D. Per MCA selection, administer Diazepam, Midazolam or Lorazepam.

REVISE

- E. Administer Midazolam 10 mg IM prior to IV start, if patient is actively seizing.
- F. If IV already established and Midazolam IM has not been administered, administer Midazolam, Lorazepam or Diazepam slow IV push until seizure stops, per MCA selection.

<p align="center"><u>Medication Options:</u> (Choose One)</p> <p><input type="checkbox"/> Midazolam 5 mg IV/IO OR</p> <p><input type="checkbox"/> Lorazepam - 4 mg IV/IO OR</p> <p><input type="checkbox"/> Diazepam - 10 mg IV/IO or rectally</p>		<p align="center"><u>Glucagon</u> 1 mg IM</p> <p><input type="checkbox"/> Included <input type="checkbox"/> Not Included</p>
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- G. If seizures persist, per MCA selection, repeat Midazolam, Lorazepam or Diazepam at the same dose or contact medical control for further instructions.

- F. Administer Midazolam 0.1mg/kg IM, maximum individual dose 10 mg prior to IV start, if patient is actively seizing
- G. If IV established and Midazolam IM has not been administered, administer Midazolam, Lorazepam or Diazepam per MCA selection.

<p align="center"><u>Medication Options:</u> (Choose One)</p> <p><input type="checkbox"/> Midazolam 0.05 mg/kg IV/IO, maximum individual dose 5 mg OR</p> <p><input type="checkbox"/> Lorazepam - 0.1 mg/kg IV/IO, max single dose 4 mg, may repeat in 5 minutes if seizure activity continues; not to exceed 0.2 mg/kg total (maximum of 8 mg) OR</p> <p><input type="checkbox"/> Diazepam - 0.1 mg/kg IV/IO or 0.5 mg/kg rectally (maximum individual dose 10 mg)</p>	
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Questions

